



L. Barbee Ponder IV

General Counsel & Vice President Regulatory Affairs

June 10, 2013

Mignon Clyburn
Chairwoman
Federal Communications Commission
445 Twelfth Street SW
Washington, DC 20554

Re: *Globalstar, Inc. Petition for Rulemaking to Reform the Commission's
Regulatory Framework for Terrestrial Use of the Big LEO MSS Band –
RM-11685
Ex Parte Notice*

Dear Chairwoman Clyburn:

Today, Globalstar, Inc. (Globalstar) and its technology partner, Jarvinian, announced the completion of the initial testing of Globalstar's proposed Terrestrial Low Power Service (TLPS), an innovative mobile broadband service intended to alleviate the chronic congestion currently being experienced over public Wi-Fi networks. Initial test results have exceeded all expectations, with TLPS surpassing public Wi-Fi by 5x the effective distance and 4x the effective capacity, and no impact on public Wi-Fi operations in adjacent channels. All tests were conducted pursuant to experimental licenses granted by the Commission's Office of Engineering and Technology.

Attached hereto is a summary of the tests, including charts showing the increases in distance and capacity associated with TLPS.

In addition to informing the Commission of these exciting new developments, Globalstar also writes to express its full support for ConnectED, President Obama's plan for connecting all schools to the Digital Age. With the necessary Commission action, Globalstar's TLPS can play an important part in meeting the ambitious objectives of ConnectED.

As you know, Globalstar filed a petition for rulemaking with the Federal Communications Commission in November 2012 seeking greater flexibility to utilize its licensed Mobile Satellite Service (MSS) spectrum for terrestrial mobile

broadband applications.¹ Such flexibility is necessary to permit Globalstar to provide its innovative TLPS, a service that can help alleviate the chronic congestion being experienced by an ever growing portion of the public, including students relying on Wi-Fi in schools and libraries around the country.

The recently issued CableLabs report summarizes the challenges facing the nation as the Commission works to free up additional spectrum for unlicensed use.² This study concludes that the 2.4 GHz Wi-Fi band will reach exhaustion by 2014, with a spectrum deficit of approximately 10 megahertz.³ As a result, “[c]onsumers are likely to experience reduced coverage and throughput,” and “WiFi will become less useful, particularly for high bandwidth services like video.”⁴ The CableLabs Study concludes that “[s]ince WiFi is central to the broadband ecosystem,” “[n]ew WiFi spectrum is [a] critical element of th[e] important national goal” of expanded broadband access.⁵

The negative consequences highlighted in the CableLabs Study are occurring now in densely populated areas and will only become worse in schools and libraries across the country. To help alleviate this harm, Globalstar has committed to provide 20,000 TLPS access points, free of charge, to schools, libraries, and other institutions across the nation if and when the Commission adopts the requested terrestrial reforms in the Big LEO band.

¹ Petition for Rulemaking of Globalstar, Inc., RM-11685 (Nov. 13, 2012).

² See “WiFi Spectrum: Exhaust Looms,” Rob Alderfer, CableLabs (May 28, 2013) (CableLabs Study), appended as Attachment A to Comments of the National Cable & Telecommunications Association, ET Docket No. 13-49 (May 28, 2013), filed in *Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Notice of Proposed Rulemaking, 28 FCC Rcd 1769 (2013). Globalstar’s recent comments in this proceeding expressed support for most of the Commission’s recommendations, but sought to ensure that Globalstar’s critical satellite services operating in a small portion of the 5 GHz band are protected. Comments of Globalstar, Inc., ET Docket No. 13-49 (May 28, 2013).

³ CableLabs Study at 4, 11. According to the CableLabs Study, approximately 90 megahertz of Wi-Fi spectrum will be needed by 2015, compared to the approximately 80 megahertz of spectrum available for Wi-Fi at 2.4 GHz. CableLabs Study at 11.

⁴ CableLabs Study at 12.

⁵ *Id.* at 22.

As wired broadband connectivity becomes increasingly pervasive, an ongoing challenge for libraries and schools is delivering that connectivity to patrons and students. In most cases, the broadband delivery mechanism for students and other users is Wi-Fi. Thus, no matter what the investment in fiber or cable, the quality of Wi-Fi determines the effective speed of Internet connectivity. Unlicensed Wi-Fi is subject to significant and continuing degradation not only by millions of uncoordinated Access Points, but also from other interference sources like microwave ovens. In many urban environments, Wi-Fi is becoming unusable as a reliable broadband delivery mechanism.


TLPS will enable schools and libraries to deliver significantly faster and more secure connectivity over managed spectrum. No matter how crowded the public Wi-Fi spectrum becomes, Globalstar's TLPS offering will continue to support the delivery of superior bandwidth. This robust mobile broadband functionality will greatly benefit students around the country, who of course do not want to be tied to a desk or attached to a cord in order to receive broadband services in their schools and libraries. Today's students want to take their smartphones, tablets, and laptops anywhere on campus to engage in discussions with teachers and other students, share ideas, create, and learn. As demonstrated in the test results announced today, there is no other wireless solution that can provide students and teachers with the coverage and speed of TLPS.

In announcing his ConnectED initiative, the President rightly asked, "In a country where we expect free Wi-Fi with our coffee, why shouldn't we have it in our schools?" Globalstar agrees with President Obama that this nation's schools deserve the finest mobile broadband experience possible. With initial testing now complete, Globalstar believes more strongly than ever that TLPS can provide this mobile broadband capability to students and teachers around the United States.

Accordingly, Globalstar again urges the Commission to move forward with a Notice of Proposed Rulemaking on Big LEO reforms and expedite the availability of innovative consumer services.

Pursuant to section 1.1206(b) of the Commission's rules,⁶ this *ex parte* letter is being filed electronically for inclusion in the public record of the above-referenced proceeding.

Respectfully submitted,



L. Barbee Ponder IV
General Counsel & Vice President Regulatory
Affairs

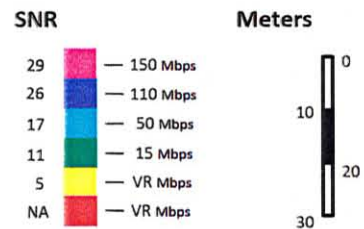
⁶ 47 C.F.R. § 1.1206(b).

Comparative Analysis of TLPS and ISM Wi-Fi

SNR and Range Comparison in an Enterprise Environment Using the Ruckus ZoneFlex 7372

Generic MIMO Access Point: Channel 6 vs. TLPS

COLOR LEGEND + SCALE



TEST LOCATION

Class A Office Building
Construction: GLSTMX

Two Canal Park, 5th Floor
Cambridge, MA 02141

42.36967 deg -71.05305 deg

TEST FREQUENCIES

802.11 Channel 6
2426.0 – 2448.0 MHz

802.11 Channel 14 (TLPS)
2473.0 – 2495.0 MHz

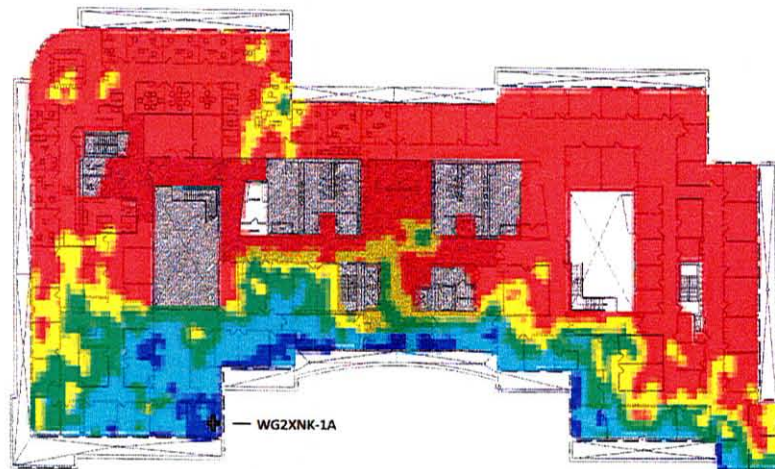
STA: WG2XNK

TEST HARDWARE

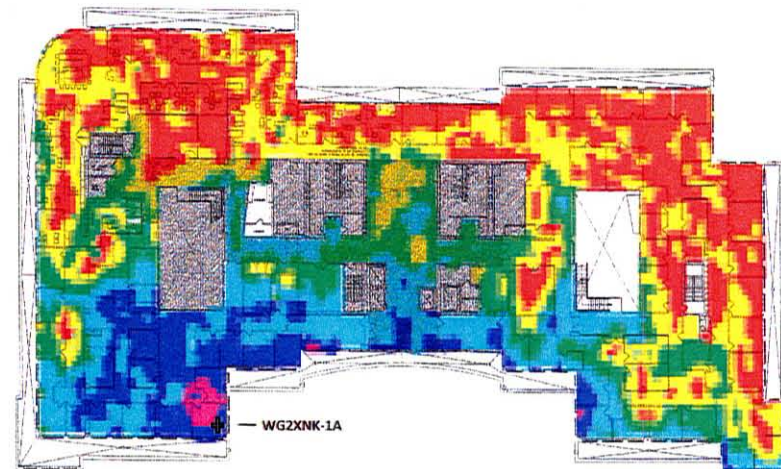
Generic MIMO AP

PEP: 23 dBm

SSID: WG2XNK-1A
LOCAL: SW562



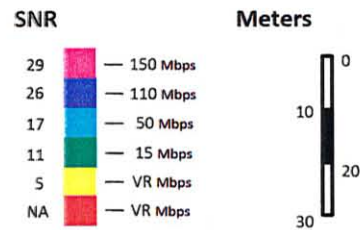
Generic MIMO AP
802.11 Channel 6



Generic MIMO AP
802.11 Channel 14 (TLPS)

Ruckus ZoneFlex 7372 Access Point: Channel 6 vs. TLPS

COLOR LEGEND + SCALE



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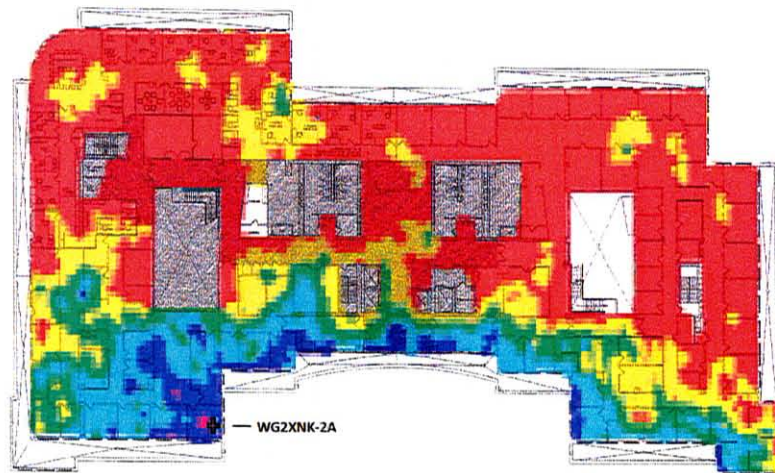
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TEST HARDWARE

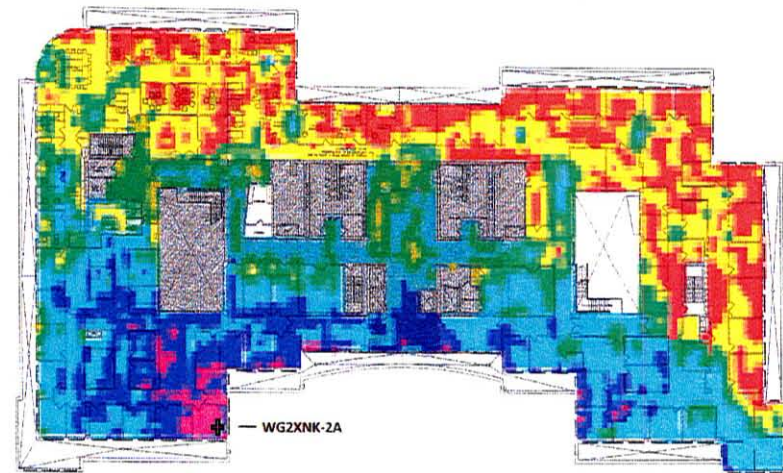
Ruckus ZoneFlex 7372

PEP: 23 dBm

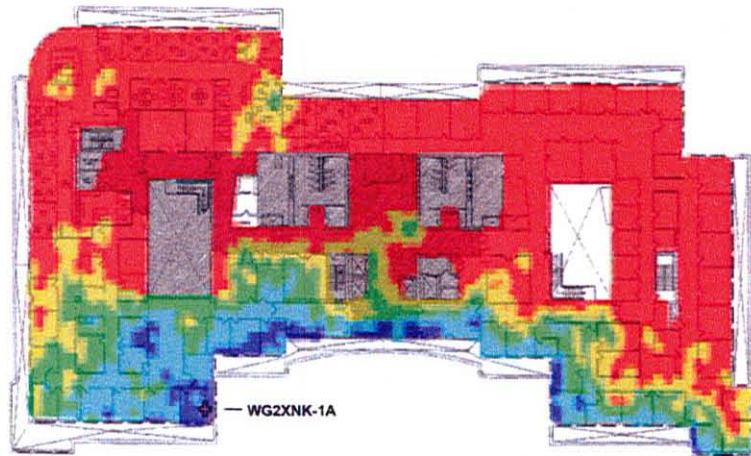
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LOCAL: SW562



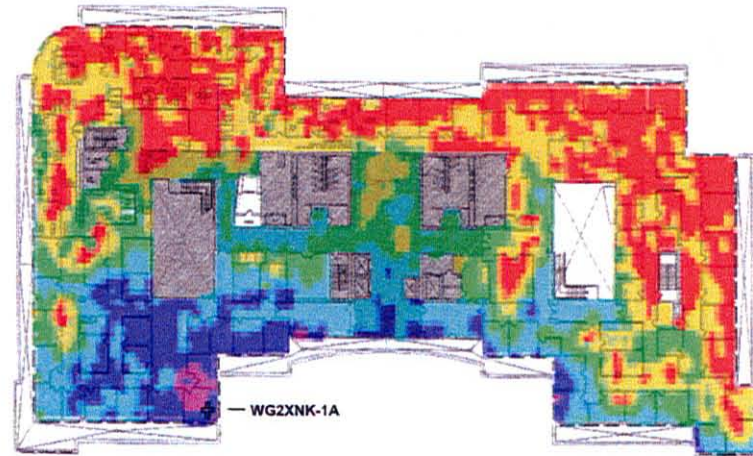
Ruckus ZoneFlex 7372 AP
802.11 Channel 6



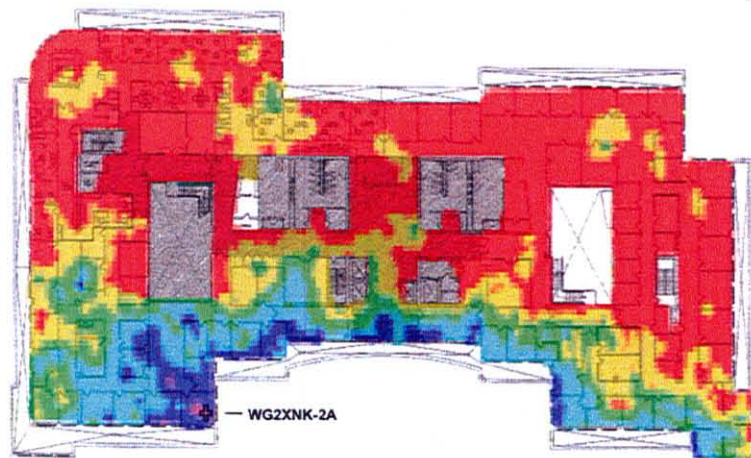
Ruckus ZoneFlex 7372 AP
802.11 Channel 14 (TLPS)



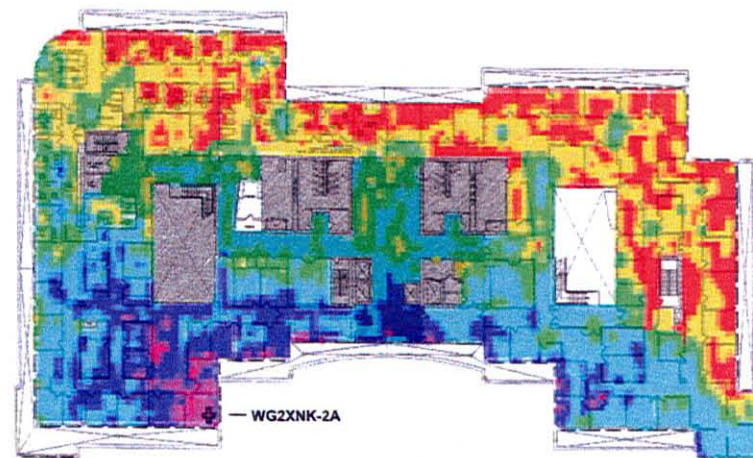
Generic MIMO AP
802.11 Channel 6



Generic MIMO AP
802.11 Channel 14 (TLPS)



Ruckus ZoneFlex 7372 AP
802.11 Channel 6



Ruckus ZoneFlex 7372 AP
802.11 Channel 14 (TLPS)